

## ATTACHMENT 1

APR 27 '01 16:13 FR URS RADIATION

512+419+5418 TO 91435548768

P.04/05

**URS Proposal - OverScrub™ Technology  
Wall Ring Application At  
Intermountain Power Project**

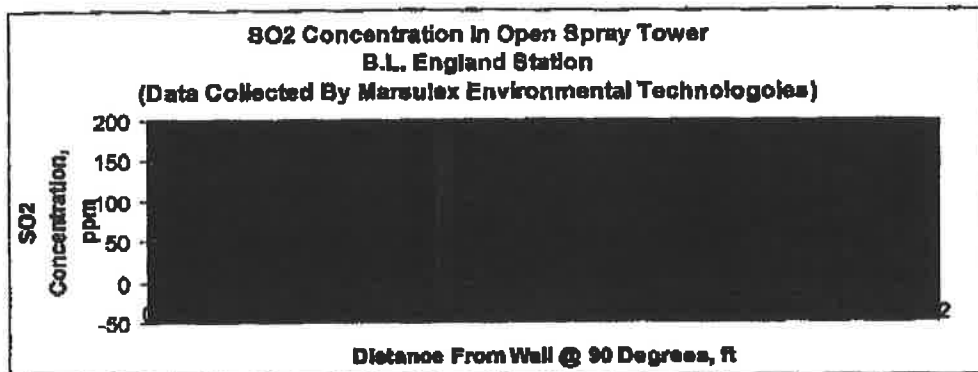
**Technology Introduction**

The wall ring technology was developed to improve the SO<sub>2</sub> removal performance of counter current spray towers where two or more spray levels are employed. By the nature of the counter current spray tower design, the density of slurry flowing counter current to the direction in the center region of the tower is typically 1.5-2.5 times the density of slurry in the annular region of the tower near the walls. This phenomena causes the gas to flow to the place of least resistance which is the annular region near the wall.

In addition, to the design limitations of spray pattern layout, the presence of the wall in the annular region eliminates the effectiveness of the slurry that impacts the walls and ultimately flows along it. It has been estimated by some, that as much as 25% of the total slurry sprayed into the tower is lost on the wall.

The results of this combined effect, is to have essentially all of the SO<sub>2</sub> which leaves the tower, to leave from the annular region near the wall. This is evident from field testing conducted on several circular towers as exemplified in Figure 1.

Figure 1: Atlantic Electric B.L. England Station SO<sub>2</sub> Concentration Vs Distance From Wall



As can be seen from this figure, 100% of the SO<sub>2</sub> leaving the tower comes from the annular region from zero to five feet from the wall. It should be noted that in the IPP square towers, this phenomena is significantly exaggerated. The presence of corners provides essential uncovered area for gas to flow and "sneak" from the absorber.

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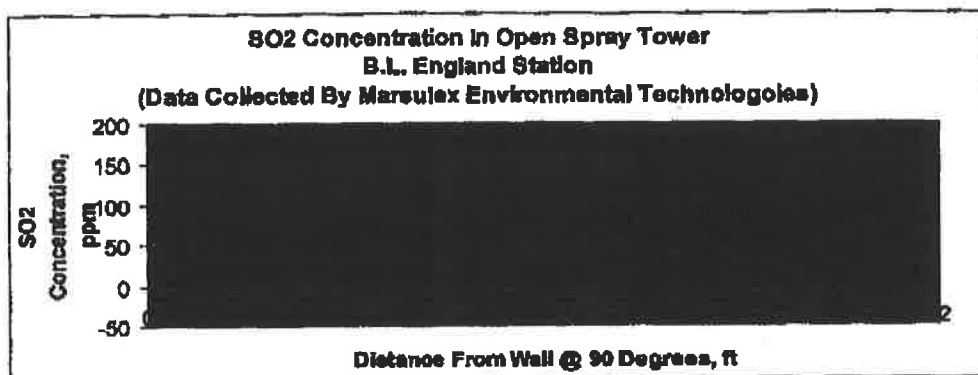
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